

**KRISHNASAMY COLLEGE OF SCIENCE, ARTS AND MANAGEMENT FOR  
WOMEN, CUDDALORE  
DEPARTMENT OF COMPUTER SCIENCE  
PROGRAMME OUTCOMES**

- To develop problem solving abilities using a computer.
- To build the necessary skill set and analytical abilities for developing computer based solutions for real life problems.
- To train students in professional skills related to Software Industry.
- To prepare necessary knowledge base for research and development in Computer Science.
- To help student build-up a successful career in Computer Science and to produce entrepreneurs who can innovate and develop software products.
- To develop the ability to analyze a problem and devise an algorithm to solve it.
- To formulate algorithms, pseudocodes and flowcharts for arithmetic and logical problems.
- To understand structured programming approach.
- To develop the basic concepts and terminology of programming in general.

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DEPARTMENT OF COMPUTER SCIENCE  
ANNAMALAI UNIVERSITY  
BACHELOR OF COMPUTER SCIENCE  
CBCS PATTERN  
(With effect from 2022-2023)**

**FUNDAMENTALS OF COMPUTERS**

**Subject Code: 22UCSCC13**

**Course Objectives:**

- An understanding of basic concepts of computer science.
- An introduction to the fundamentals of hardware, software and programming.
- To understand the concept of Number System.
- To know the types of memory for storage purpose.
- To understand the types of input devices to feed the data for action.

**Course Outcomes:**

- Explain the needs of hardware and software required for a computation task.
- Can have the knowledge about the generations of computers.
- Understand the concept of output device.
- Having the skill about the various types of languages.
- Understand the concept of file processing.

**PROGRAMMING IN C**

**Subject Code:22UCSCC14**

**Course Objectives:**

- To Provide complete knowledge of C language
- Students will be able to develop logics which will help them to create programs,applications in C.
- By learning the basic programming constructs they can easily switch over to any other language in future.

- To understand the concept of function types.
- To acquire knowledge about pointers.

**Course Outcomes:**

- To understand the concepts of data types and operators
- To analyze the usages of the various programming constructs and functions
- To interpret the importance of arrays and pointers
- To identify the purpose of structures, unions, macros and bit fields
- To develop programs using dynamic memory allocation and data file operations

**PROGRAMMING IN C - LAB**

**Subject Code: 22UCSCP15**

**Course Objectives:**

- To Develop Programs In C Using Basic Constructs.
- Familiarize The Different Control And Decision Making Statements In “C”
- Build Programs Using Arrays And Strings.
- Provide Knowledge on Working With Files And Functions.
- To Understand The Concepts of Structures.

**Course Outcomes:**

- To Develop Programs In C Using Basic Constructs.
- Familiarize The Different Control And Decision Making Statements In “C”
- Build Programs Using Arrays And Strings.
- Provide Knowledge On Working With Files And Functions.
- To Understand The Concepts of Structures.

**PROGRAMMING WITH C++**

**Subject Code: 22UCSCC23**

**Course Objectives:**

- Object Oriented concepts,C++ language features.

- Classes, Objects, Inheritance, and Polymorphism.
- Functions, Constructors, Streams and Files.

**Course Outcomes:**

- Able to understand OOPs concept, C++ language features.
- Able to understand and apply the concepts of Classes & Objects, friend function, constructors and destructors in program design.
- Able to design & implement various forms of inheritance, and String classes.
- Able to apply and analyze operator overloading, and runtime polymorphism.
- Able to analyze and explore various Stream classes, I/O operations and Exception.

**PROGRAMMING WITH C++ LAB**

**Subject Code: 22UCSCP24**

**Course Objectives:**

- Identify and practice the object-oriented programming concepts and techniques,
- Practice the use of C++ classes and class libraries, arrays, vectors, inheritance and file I/O stream concepts.

**Course Outcomes:**

- Creating simple programs using classes and objects in C++.
- Implement Object Oriented Programming Concepts in C++.
- Develop applications using stream I/O and file I/O.
- Implement simple graphical user interfaces.
- Implement Object Oriented Programs using templates and exceptional handling concepts.

**DIGITAL LOGIC FUNDAMENTALS**

**Subject Code: 22UCSCE26-1**

**Course Objectives:**

- To Understand the basic concepts of Digital Circuits and Logic design of Computers.

**Course Outcomes:**

- To learn the basic design of Computers, Number Systems and Binary Codes.
- To understand the Boolean algebra and the Logic Gates Operations.

- To learn and practice the K-Map Simplifications.
- To study the Design Procedure of Adders, Subtractors and Multilevel Circuits.
- To understand Flipflops, its types and the design of Counters.

## **PROGRAMMING IN JAVA**

**Subject Code: 22UCSCC33**

### **Course Objectives:**

- Understand fundamentals of programming such as variables, conditional and iterative execution, methods, etc.
- Understand fundamentals of object-oriented programming in Java, including defining classes, invoking methods, using class libraries, etc.
- Be aware of the important topics and principles of software development.
- Have the ability to write a computer program to solve specified problems.
- Be able to use the Java SDK environment to create, debug and run simple Java programs.

### **Course Outcomes:**

- Competence on the development of small to medium sized application programs that demonstrate professionally acceptable coding.
- Demonstrate the concept of object oriented programming through Java.
- Apply the concept of Inheritance, Modularity, Concurrency, Exceptions handling and data persistence to develop java program.
- Develop java programs for applets and graphics programming.
- Understand the fundamental concepts of AWT controls, layouts and events.

## **PROGRAMMING IN JAVA LAB**

**Subject Code: 22UCSCP34**

### **Course Objectives:**

- The main objective of JAVA Programming Lab is to provide the students a strong foundation on programming concepts and its applications through hands-on training.
- To practice the Object, Class, inheritance and recursion concepts in Java programming.

- To implement and gain knowledge in packages, interfaces, exception and thread handling.
- To write programs to implement graphics, applets and event handling.
- To implement AWT classes and windows fundamentals.

**Course Outcomes:**

- Understand the basic concepts of Java Programming with emphasis on ethics and principles of professional coding.
- Demonstrate the creation of objects, classes and methods and the concepts of constructor, methods overloading and inheritance.
- Construct Java programs using Multithreaded Programming and Exception Handling.
- Understand the implementation of Graphics and Applets.
- Implementation of AWT controls, layouts and windows fundamentals.

**COMPUTER GRAPHICS**

**Subject Code: 22UCSCE36-2**

**Course Objectives:**

- To understand the fundamentals about Computer Graphics.
- To familiar with Scanners and I/O devices.
- To be exposed to 2D and 3D Transformations and clipping.

**Course Outcomes:**

- Remember the basic concepts of Graphics system.
- Understanding scanner systems and I/O Devices.
- Apply 2D Transformations.
- Evaluate 3D Transformations.
- Implement the Visual surface techniques.

**PYTHON PROGRAMMING**

**Subject Code: 22UCSCC43**

**Course Objectives:**

- Describe the core syntax and semantics of Python programming language.
- Discover the need for working with the strings and functions.
- Illustrate the process of structuring the data using lists, dictionaries, tuples and sets.
- Understand the usage of Files and Graphics.
- Understand the usage of sets and Dictionaries, Recursive Functions.

**Course Outcomes:**

- To Understand the principles of Python and acquire skills in programming in python
- To develop the emerging applications of relevant field using Python
- Interpret the fundamental Python syntax and semantics and be fluent in the use of Python control flow statements.
- Able to develop simple turtle graphics programs in Python
- To Understand the Files, Exception handling, object oriented programming principles in Python.

**PYTHON PROGRAMMING LAB**

**Subject Code: 22UCSCP44**

**Course Objectives:**

- To implement the python programming features in practical applications.
- To write, test, and debug simple Python programs.
- To implement Python programs with conditionals and loops.
- Use functions for structuring Python programs.
- Represent compound data using Python lists, tuples, sets, dictionaries, turtles, Files and modules.

**Course Outcomes:**

- Understand the numeric or real-life application problems and solve them.
- Apply a solution clearly and accurately in a program using Python.
- Apply the best features available in Python to solve the situational problems.
- Understand the concept of file handling in Python.

- Apply the recursive methods in Python.

## **SOFTWARE ENGINEERING**

**SubjectCode: 22UCSCS48**

### **Course Objectives:**

- To introduce the software development life cycle models.
- To introduce concepts related to Requirements engineering, modelling.
- To provide an insight into design engineering.
- To understand user interface design and quality assurance.
- To know the testing strategies.

### **Course Outcomes:**

- The concepts of software processes and software process models.
- Describe the scenario-based and class-based models of software systems.
- Apply design concepts and frame conceptual models for a given project.
- Calculate effort estimation using COCOMO model.
- Explain the testing strategies for ensuring software quality and agile development process.

## **FUNDAMENTALS OF INFORMATION TECHNOLOGY**

**Subject Code: 22UCSCN37**

### **Course Objectives:**

- To introduce IT in a simple language to all undergraduate students, regardless of their specialization.
- Help them to pursue specialized programs leading to technical and professional careers.
- Enhances certifications in the IT industry.
- Introducing skills relating to IT basics, computer applications, programming.
- A glimpse on various types of software.



**Course Outcomes:**

- Students understand Major components of Computer System and its working principles.
- Students learn and understand the Role of an Operating System and basic terminologies of networks.
- Students understand how the Information Technology aids for the Current scenario.
- Students understand the Computer Software.
- Students understand internet applications.

**INTERNET TECHNOLOGY****Subject Code: 22UCSCN47****Course Objectives:**

- Fundamentals of Internet, Connectivity and its Resource Requirements.
- To understand the Internet Technology and its applications
- To Understand WWW and Web Browsers.
- Mailing system and applications of Internet.
- To Understand relay chat

**Course Outcomes:**

- Students understand the Fundamentals of Internet, Connectivity and its resource Requirements.
- Students understand the Internet Technology and its applications.
- Students understand the basis of WWW and Web Browsers.
- Students learn how to Mailing system and applications of Internet.
- Students understand relay chat that is how to read e- contents

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**DESIGN AND ANALYSIS OF ALGORITHMS**

**SUBJECT CODE: 22PCSCC11**

**COURSE OBJECTIVES**

- Learning basic concepts of Algorithm.
- Method of sorting algorithms analyzed.
- To Analyze Greedy Algorithm and Knapsack Problem.
- To analyze Dynamic Programming.
- To learn effective problem solving in Computing applications and analyze the algorithmic procedure to determine the computational complexity of algorithms.

**COURSE OUTCOMES**

- Acquire knowledge on the concepts of Algorithm
- Implementing various Algorithmic and sorting approach
- Able to develop Greedy Algorithm.
- Acquire knowledge in Dynamic Programming.

## **ADVANCED JAVA PROGRAMMING**

**SUBJECT CODE:22PCSCC12**

### **COURSE OBJECTIVES**

- To get familiar with the concept of packages, interface.
- Able to understand Inheritance and Exception handling in java.
- To learn the concept of Graphical User Interface (GUI).
- Analyse Network Programming, and database manipulation.
- Student will be able to develop web application using Java Servlet and Java Server Pages technology.

### **Course Outcomes**

- Identify classes, objects, members of a class and the relationships among them needed for a finding the solution to specific problem.
- Use the Java language for writing well-organized, complex computer programs with both command line and graphical user interfaces.
- Identify and describe common abstract user interface components to design GUI in Java using Applet & AWT along with response to events
- Apply Servlets and JSP for creating Web based applications using JDBC
- Design and Develop various application by integrating any of Servlets, JSPs, Swing and Applet using Database

## **ADVANCED DATABASE MANAGEMENT SYSTEM**

**SUBJECT CODE: 22PCSCC13**

### **COURSE OBJECTIVES**

- To understand the basic concepts and terminology related to DBMS and Relational Database Design.
- To the design and implement Distributed Databases.
- To apply normalization techniques to improve database design.

- To understand advanced DBMS techniques to construct tables and write effective queries, forms, and reports.
- Analyze a T/O based techniques for designing the database.

### **Course Outcomes**

- Exposure for students to write complex queries including full outer joins, self-join, sub queries, and set theoretic queries.
- Know how of the file organization, Query Optimization, Transaction management, and database administration techniques.
- Elaborate the concept of Concurrency control and Failure Recovery.
- Illustrate concept of CC on B++ tree, Optimistic CC
- Use Modern database such as XML and relational databases.

### **ALGORITHM LAB USING JAVA**

#### **SUBJECT CODE: 22PCSCP14**

#### **COURSE OBJECTIVES**

- Implement Sorting algorithm methods.
- Analyze DFS and BFS Algorithm methods.
- To evaluate Back Tracking and Greedy Algorithm.
- Implement Dijkstra's Algorithm.
- To Develop Dynamic Programming.

### **Course Outcomes**

- To get Knowledge about Sorting Algorithm
- To acquire techniques about DFS and BFS Algorithmic approach
- To perform various Back track Programming techniques
- To acquire knowledge in Dijkstra's Algorithm
- To become a better knowledge in algorithm

## **ADVANCED RDBMS LAB**

**SUBJECT CODE: 22PCSCP15**

### **COURSE OBJECTIVES**

- To explore the features of a Database Management Systems.
- To interface a database with front end tools.
- To understand the internals of a database system.
- To use of different Evaluation Plans.
- To interface of Concurrency & Transactions & Big Date Analysis Using Hadoop.

### **Course Outcomes**

- Ability to use databases for building web applications.
- Gaining knowledge about the internals of a database system.
- To use of ER Modeling, Database Design & Normalization
- Implement the plan using Web Applications Using PHP & My SQL
- Analysis various Query Evaluation plans, Big Data Analysis

## **COMPILER DESIGN**

**SUBJECT CODE: 22PCSCE16-1**

### **COURSE OBJECTIVES**

- Discover principles, algorithms and techniques that can be used to construct various phases of compiler.
- Acquire knowledge about finite automata and regular expressions.
- Learn context free grammars, compiler parsing techniques.
- Explore knowledge about Syntax Directed definitions and translation scheme.
- Understand intermediate machine representations and actual code generation.

### **Course Outcomes**

- To provide sound knowledge in Lexical Analysis.
- To understand the importance of context-free Grammar.
- To explore knowledge in Semantic Analysis.

- To know the Variants of Syntax trees.
- To identify Code generations and code optimization.

## **FUNDAMENTALS OF COMPUTER APPLICATION**

**SUBJECT CODE: 22PCSCO17-1**

### **COURSE OBJECTIVES**

- To know about computer and basic applications of computer.
- To get knowledge about operating system.
- To aim at imparting a basic level appreciation Programme.
- To Understand word processing.  
To develop Word spread sheet and power point Presentation.

### **Course Outcomes**

- Students are able to know about computer and basic applications of computer.
- Students are able to get knowledge about operating system.
- Students are able to aim at imparting a basic level appreciation Programme.
- Students can able to make spread sheets and its styles.
- Students get knowledge about Power point presentation.

## **ADVANCED WEB TECHNOLOGY**

**SUBJECT CODE: 22PCSCC21**

### **COURSE OBJECTIVES**

- Explore the backbone of webpage creation by developing .NET skill.
- Enrich knowledge about HTML control and web control classes.
- Provide depth knowledge about ADO.NET
- Understand the need of usability, evaluation methods for web services.
- Developing Component based Programming.

### **Course Outcomes**

- Acquire knowledge on the concepts of .Net

- Implementing various HTML controls and Visual studio projects
- Able to develop applications using ADO .Net
- Acquire knowledge in web services
- Develop websites which contains adaptive web pages

## **DATA MINING AND BUSINESS INTELLIGENCE**

**SUBJECT CODE: 22PCSCC22**

### **COURSE OBJECTIVES**

- Demonstrate an understanding of the importance of data mining.
- Understand principles of business intelligence.
- Organize and prepare the data needed for data mining using pre-processing techniques.
- Perform exploratory analysis of the data to be used for mining.
- Implement the appropriate data mining methods like classification, clustering or Frequent Pattern mining on large data sets.

### **Course Outcomes**

- Analyse the concept of Data mining, Data Warehouse, Business Intelligence and OLAP.
- Demonstrate data pre-processing techniques and application of association rule mining algorithms.
- Apply various classification algorithms and evaluation of classifiers for the given problem.
- Analyse data mining for various business intelligence applications for the given problem.
- Apply classification and regression techniques for the given problem.

## **DISTRIBUTED OPERATING SYSTEM**

**SUBJECT CODE: 22PCSCC23**

### **COURSE OBJECTIVES**

- To study Distributed operating system concepts.
- To understand hardware, software and Communication in Distributed OS.
- To learn the distributed resource management components.
- Practices to learn concepts of OS and Program the principles of Operating Systems.

- To Learn Linux Operating System.

### **Course Outcomes**

- Acquire knowledge on the concepts advanced operating system and approaches.
- Implementing Lamport's Algorithm - Token Based Algorithms –Distributed Deadlock Detection Algorithm.
- Gaining knowledge Distributed Resource Management–Distributed File Systems.
- Acquire knowledge in Failure Recovery and Fault Tolerance.

### **ADVANCED WEB TECHNOLOGIES LAB**

**SUBJECT CODE: 22PCSCP24**

#### **COURSE OBJECTIVES**

- Create simple Web service Programs.
- Develop windows application based web services.
- Accessing Database in Web services.
- To create an application that simulates sending a SOAP message.
- Develop a Web intranet/internet based Web Service Client.

### **Course Outcomes**

- Acquire Excellent knowledge and execute simple web service programs.
- Implementing various techniques in web services.
- Able to develop applications based web services from existing programs.
- Using SOAP techniques.
- Develop Client server based web Services.

### **DATA MINING LAB USING R**

**SUBJECT CODE: 22PCSCP25**

#### **COURSE OBJECTIVES**

- To introduce the concept of data Mining as an important tool for enterprise data management and as a cutting-edge technology for building competitive advantage.



- To enable students to effectively identify sources of data and process it for data mining.
- To learn how to gather and analyze large sets of data to gain useful business understanding through the R language.
- To impart skills that can enable students to approach business problems.
- To analytically identifying opportunities to derive business value from data.

### **Course Outcomes**

- Use different features of R Programming language.
- Preprocess the data for mining for any dataset.
- Determine association rules.
- Model the classifiers for classifying various dataset.
- Examine clusters from the available data.

### **OPEN SOURCE COMPUTING**

**SUBJECT CODE: 22PCSCE26-2**

#### **COURSE OBJECTIVES**

- To understand the features of PHP.
- To develop the different applications using PHP.
- To demonstrate the applications using PHP with Mysql.
- To understand the concepts of Perl.
- To develop the applications using Perl.

### **Course Outcomes**

- Students are able to understand the features of PHP.
- Students are able to develop the different applications using PHP.
- Students are able to demonstrate the applications using PHP with Mysql.
- Students are able to understand the concepts of Perl.
- Students are able to develop the applications using Perl.

### **DIGITAL IMAGE PROCESSING**

**SUBJECT CODE: 22PCSCC31**

## **COURSE OBJECTIVES**

- To provide complete knowledge on Digital Image Processing methods
- Able to Understand image processing methods in Spatial domain and Frequency domain
- To Understand Edge detection, Edge features and their applications.
- To Provide concepts of Image Compression Models
- Enable the students to understand the concepts and implement them empirically.

## **Course Outcomes**

- Analyze the concepts and fundamentals of Digital Image Processing
- Demonstrate Spatial domain and Frequency domain and its applications
- Analysis of residual based technique, Canny edge detection and their applications.
- Apply Image Compression techniques
- Use different features of Image Segmentation

## **MACHINE LEARNING**

**SUBJECT CODE: 22PCSCC32**

## **COURSE OBJECTIVES**

- To introduce students to the basic concepts and techniques of Machine Learning.
- To understand the regression methods, regularization methods.
- Analyze clustering methods and metrics.

- To discover patterns in data and then make predictions based on often complex patterns to answer business questions, detect and analyze trends and help solve problems.
- To introduce students to the state-of-the-art concepts and techniques of Machine Learning.

### **Course Outcomes**

- APPLY THE MACHINE LEARNING CONCEPTS IN REAL LIFE PROBLEMS.
- TO IMPLEMENT AND ANALYZE EXISTING LEARNING ALGORITHMS, INCLUDING WELL-STUDIED METHODS FOR CLASSIFICATION, REGRESSION, CLUSTERING.
- TO IDENTIFY MACHINE LEARNING TECHNIQUES SUITABLE FOR A GIVEN PROBLEM.
- TO DESIGN APPLICATION USING MACHINE LEARNING TECHNIQUES.
- TO SOLVE THE PROBLEMS USING VARIOUS MACHINE LEARNING TECHNIQUES.

## **RESEARCH METHODOLOGY**

**SUBJECT CODE: 22PCSC33**

### **COURSE OBJECTIVES**

- To demonstrate the knowledge of research processes (reading, evaluating, and developing)
- To perform literature reviews using print and online databases;
- To identify, explain, compare, and prepare the key elements of a research proposal/report
- To compare and contrast quantitative and qualitative research
- To analyze Measurement concepts

### **Course Outcomes**

- Students are able to demonstrate knowledge of research processes (reading, evaluating, and developing);
- Students are able to perform literature reviews using print and online databases

- Students are able to identify, explain, compare, and prepare the key elements of a research proposal/report.
- Students are able to compare and contrast quantitative and qualitative research
- Students are able to understand Concepts of Measurements.

### **IMAGE PROCESSING LAB**

**SUBJECT CODE: 22PCSCP34**

#### **COURSE OBJECTIVES**

- To impart skills on the processing of digital images.
- To learn the transformation of images from spatial domain to frequency domain.
- To perform the edge deduction techniques.
- To gain knowledge about compressing the images using suitable techniques.
- To know the segmentation methods

#### **Course Outcomes**

- Retrieve and display the image.
- Transform the domain from spatial to frequency.
- Apply suitable operators to detect the edge.
- Perform the process of compression and segmentation using certain methods
- Implementation the concept of erosion and dilation

### **MACHINE LEARNING LAB**

**SUBJECT CODE: 22PCSCP35**

#### **COURSE OBJECTIVES**

- To get an overview of the various machine learning techniques.
- To demonstrate python and its applications
- To familiarize various machine learning software libraries and data sets publicly available.

- To develop machine learning based system for various real-world problems.
- The knowledge of using machine learning to make predictions in a scientific computing environment

### **Course Outcomes**

- Understand the mathematical and statistical perspectives of machine learning algorithms through python programming.
- Understand complexity of Machine Learning algorithms and their limitations;
- Understand modern notions in data analysis-oriented computing;
- Apply common Machine Learning algorithms in practice and implementing their own.
- Perform experiments in Machine Learning using real-world data.

## **CLOUD COMPUTING**

### **SUBJECT CODE: 22PCSCE36-1**

### **COURSE OBJECTIVES**

- The objective of this course is to provide students with the comprehensive and in-depth knowledge of Cloud Computing concepts.
- Introducing and researching state-of-the-art in Cloud Computing fundamental issues
- To Understand Cloud Computing architecture and applications.
- To expose the students to frontier areas of Cloud Computing and information systems.
- To provide sufficient foundations to enable further study and research.

### **Course Outcomes**

- To get depth knowledge Cloud concepts and technologies
- To acquire various analytics service in cloud computing
- Students are able to understand Cloud applications
- To get knowledge in Python based cloud systems
- To acquire knowledge in cloud architecture and security

## **WEB SERVICES**

**SUBJECT CODE: 22PCSCO37-3**

### **COURSE OBJECTIVES**

- To Understand Web Services and implementation model for SOA
- To Understand the SOA, its Principles and Benefits.
- Understanding cloud computing as a web service.
- Discuss the concept of virtualization and data in cloud.
- Learning basic concept of cloud computing & cloud service Modes.

### **Course Outcomes**

- Understand & Identify basic concept of Web Services & Web Service applications.
- Explain the Concept of Web services Architecture and its characteristics
- Student Learn about current trends in SOAP Web Services.
- Illustrate about UDDI Registries & Programming with UDDI.
- Elaborate about Virtualization, Virtual Machine (VM) Technology, Virtual Machine Monitor or Hypervisor in current trends.

## **ADVANCED COMPUTER NETWORKS**

**SUBJECT CODE: 22PCSCC41**

### **COURSE OBJECTIVES**

- Focusing on advanced topics and is a must for anyone interested in doing research in computer networks.
- To build a solid foundation in computer networks concepts and design
- The course will expose students to the concepts of traditional as well as modern day computer networks –Wireless transmissions, Communication Satellites.
- The student understand concept of like Data Link Layer in the Internet & Medium Access Layer.
- Student's study this paper knows about Internet Transport Protocol (ITP), Network Security and Cryptography.

## **Course Outcomes**

- Analysis a basic concept of Network Hardware, software and different types of transmission techniques.
- Design, Implement & Evaluate Wireless transmission & Communication Satellite.
- Communicate Effectively the Medium Access Layer & Data Communication etc.
- Recognize the principal of Routing Algorithm & Congestion Control Algorithm.
- Elaborate advanced network concept of Network Security & Cryptography

## **BLOCKCHAIN TECHNOLOGY**

**SUBJECT CODE: 22PCSCC42**

### **COURSE OBJECTIVES**

- To understand the history Blockchain
- To Understand types and applications of Blockchain
- To acquire knowledge about cryptography and consensus algorithms.
- Deploy projects using Web and design.
- To Understand blockchain based Security issues.

## **Course Outcomes**

- Contentedly discuss and describe the history, types and applications of Block chain
- Gains familiarity with cryptography and Consensus algorithms.
- Create and deploy projects using Web3j and design block chain based applications.
- Implement an ICO on Ethereum
- Design block chain based application with Swarm and IPFS

## **MOBILE COMPUTING**

**SUBJECT CODE: 22PCSCE43-1**

### **COURSE OBJECTIVES**

- To Introduce the concept of wireless devices with signal, Antenna, Radio Frequencies, Signal Propagation.
- To Introduce wireless communication and networking principles
- To know the connectivity of cellular networks, Wireless LAN, GSM, CDMA.
- To introduce the WAP Architecture, MANET and Routing
- To analyze next generation Mobile Communication System.

### **Course Outcomes**

- To understand basic concepts of Mobile Communication.
- To analyze next generation Mobile Communication System.
- To understand network and transport layers of Mobile Communication.
- Classify different types of mobile telecommunication systems
- Analyze various protocols of all layers for mobile and ad hoc wireless communication networks.

### **PROJECT ( Industrial / Research)**

**SUBJECT CODE: 22PCSCD44**

### **COURSE OBJECTIVES**

- To provide insights in to real world challenges and problem those required IT
- Related solutions.
- To empower the students to bring out the IT related solutions for the requirements.
- To expose the students to have a broad idea of literature related to the Project domain.
- To enable students to use all concepts of IT in creating a solution for a problem.
- To improve the team building, communication and management skills of the students.



## **Course Outcomes**

- Discover the most thrust areas in the field of Information Technology.
- Develop a complete project for a particular problem domain.
- Identify analyses, design and implement any IT related projects.
- Compare and contrast existing solutions for developing a project.
- Demonstrate an ability to work in teams and manage with good communication skill.